CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.08/KRIDL/CSR-09/140c/CEMENT/2016-17 Date: 13.09.2016

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer**, Kodigehalli Sub Division, BBMP, Bangalore.
*AGENCY	:	**Executive Engineer,** KRIDL, Bangalore.
*NAME OF THE WORK	:	Improvements to roads and drains SC colony at Maruthinagara and BB Nagara in Ward No.08 Kodigehalli Sub Division, BBMP, Bangalore.
*REFERENCE	:	BBMP/AEE/BTP/WO/99/2016-17 Dated: 05.08.2016
SAMPLE ID	:	Cement – Sample 1
SAMPLE RECEIVED ON	:	10.09.2016
PERIOD OF TESTING	:	10.09.2016 to 13.09.2016

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	30.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	145 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	480 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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Job No.: CTCE/BBMP/W.No.08/KRIDL/CSR-09/140c/SAND-Gradation/2016-17 : 13.09.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

*** Agency** : **Executive Engineer,** KRIDL, Bangalore.

*** Name of Work** : Improvements to roads and drains SC colony at Maruthinagara and BB Nagara in Ward No.08 Kodigehalli Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/BTP/WO/99/2016-17 Dated: 05.08.2016

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates – Sample 1

Sample Received on : 10.09.2016

Date of Testing : 13.09.2016

Total Wt. of Aggregates in gms **1000**

AE-8

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	96.10	90-100	90-100	90-100	95-100
2.36	77.10	60-95	75-100	85-100	95-100
1.18	56.10	30-70	55-90	75-100	90-100
600 Micron	27.10	15-34	35-59	60-79	80-100
300 Micron	11.10	5-20	8-30	12-40	15-50
150 Micron	4.60	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

Civil-Tech Consultants & Engineers Bangalore

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Job No.: CTCE/BBMP/W.No.08/KRIDL/CSR-09/140c/AGG/GR/2016-17 : 13.09.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

*** Agency** : **Executive Engineer,** KRIDL, Bangalore.

*** Name of Work** : Improvements to roads and drains SC colony at Maruthinagara and BB Nagara in Ward No.08 Kodigehalli Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/BTP/WO/99/2016-17 Dated: 05.08.2016

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 10.09.2016

Date of Testing : 13.09.2016

Total Wt. of Aggregates in gms= **5000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.00	95-100	85-100
20	32.00	30-70	0-20
10	12.00	10-35	0-5
4.75	4.00	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/W.No.08/KRIDL/CSR-09/140c/CUBE/2016-17 14.10.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

*** Agency** : **Executive Engineer,** KRIDL, Bangalore.

*** Name of the work** : Improvements to roads and drains SC colony at Maruthinagara and BB Nagara in Ward No.08 Kodigehalli Sub Division, BBMP, Bangalore.

*** Reference** : BBMP/AEE/BTP/WO/99/2016-17 Dated: 05.08.2016

*** Sample ID** : Pavement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

AE-8

Compressive Strength as on : 28th day

Sample Received on : 14.10.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	16.09.2016	14.10.2016	8.126	478.3	21.26
2	16.09.2016	14.10.2016	8.259	493.2	21.92
3	16.09.2016	14.10.2016	8.342	502.3	22.32

* Information is furnished by the Customer/Representative

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Job No.: CTCE/BBMP/W.No.08/KRIDL/CSR-09/140c/CUBE/2016-17 14.10.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

*** Agency** : **Executive Engineer,** KRIDL, Bangalore.

*** Name of the work** : Improvements to roads and drains SC colony at Maruthinagara and BB Nagara in Ward No.08 Kodigehalli Sub Division, BBMP, Bangalore.

*** Reference** : BBMP/AEE/BTP/WO/99/2016-17 Dated: 05.08.2016

*** Sample ID** : Pavement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 14.10.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	16.09.2016	14.10.2016	8.129	485.5	21.58
2	16.09.2016	14.10.2016	8.297	499.3	22.19
3	16.09.2016	14.10.2016	8.322	509.3	22.64

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TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

*** Agency** : **Executive Engineer,** KRIDL, Bangalore.

*** Name of the work** : Improvements to roads and drains SC colony at Maruthinagara and BB Nagara in Ward No.08 Kodigehalli Sub Division, BBMP, Bangalore.

*** Reference** : BBMP/AEE/BTP/WO/99/2016-17 Dated: 05.08.2016

*** Sample ID** : Pavement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

AE-8

*** Grade of Concrete** : M_{20}

Compressive Strength as on : 28th day

Sample Received on : 14.10.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	16.09.2016	14.10.2016	8.110	480.3	21.35
2	16.09.2016	14.10.2016	8.285	503.2	22.36
3	16.09.2016	14.10.2016	8.321	510.2	22.68

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TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

*** Agency** : **Executive Engineer,** KRIDL, Bangalore.

*** Name of the work** : Improvements to roads and drains SC colony at Maruthinagara and BB Nagara in Ward No.08 Kodigehalli Sub Division, BBMP, Bangalore.

*** Reference** : BBMP/AEE/BTP/WO/99/2016-17 Dated: 05.08.2016

*** Sample ID** : Pavement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

AE-8

Compressive Strength as on : 28th day

1

Sample Received on : 14.10.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	16.09.2016	14.10.2016	8.165	502.2	22.32
2	16.09.2016	14.10.2016	8.230	512.3	22.77
3	16.09.2016	14.10.2016	8.358	528.3	23.48

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Job No.: CTCE/BBMP/W.No.08/KRIDL/CSR-09/140c/CUBE/2016-17 18.10.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* **Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

* **Agency** : **Executive Engineer,** KRIDL, Bangalore.

* **Name of the work** : Improvements to roads and drains SC colony at Maruthinagara and BB Nagara in Ward No.08 Kodigehalli Sub Division, BBMP, Bangalore.

* **Reference** : BBMP/AEE/BTP/WO/99/2016-17 Dated: 05.08.2016

* **Sample ID** : Covering slab drain concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

* **Grade of Concrete** : M_{20}

AE-8

Compressive Strength as on : 28th day

1

Sample Received on : 18.10.2016

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	20.09.2016	18.10.2016	8.120	482.3	21.44
2	20.09.2016	18.10.2016	8.290	493.3	21.92
3	20.09.2016	18.10.2016	8.315	502.3	22.32

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